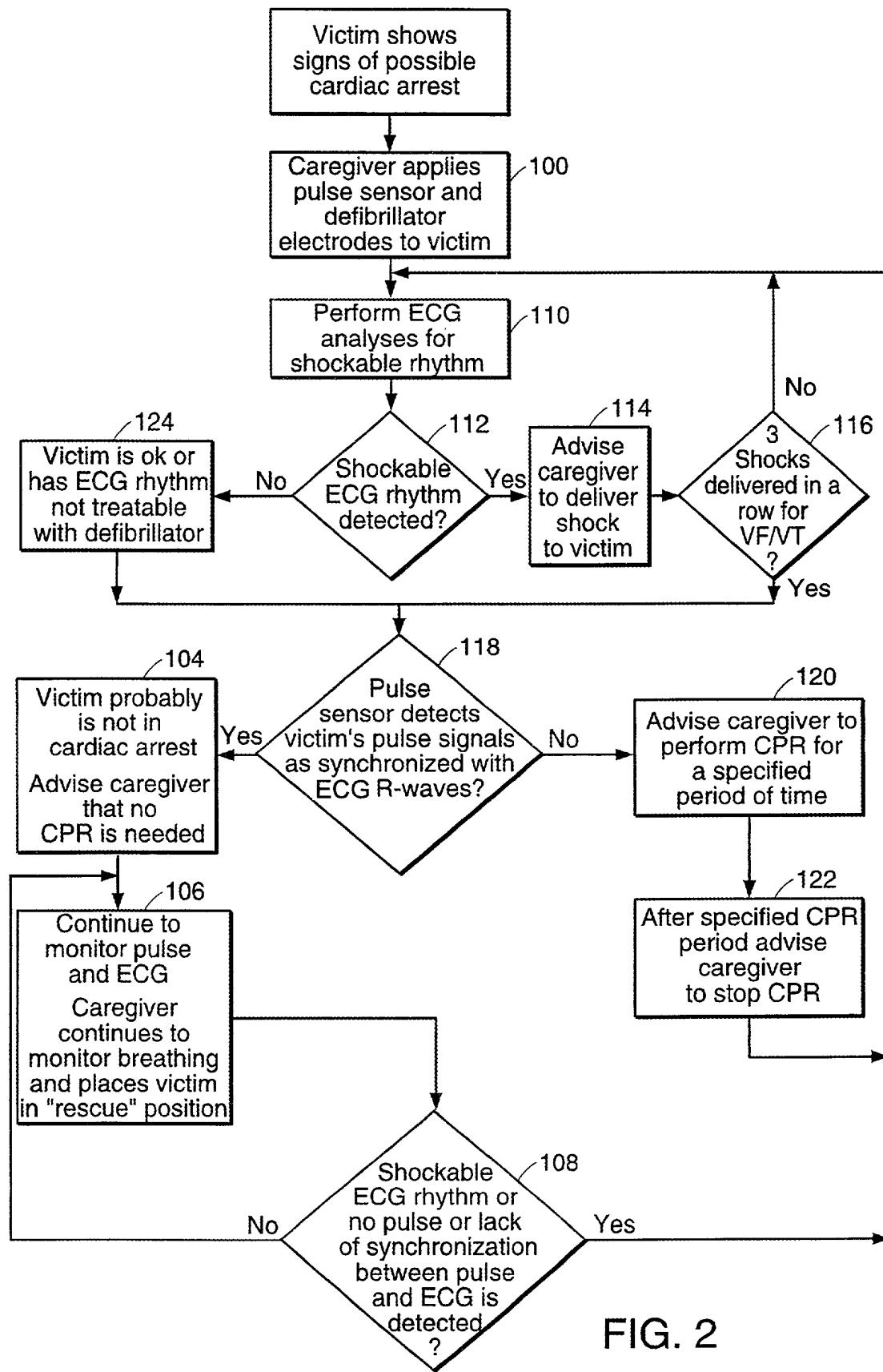


FIG. 1



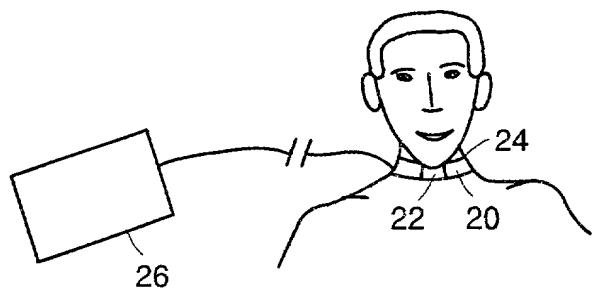


FIG. 3

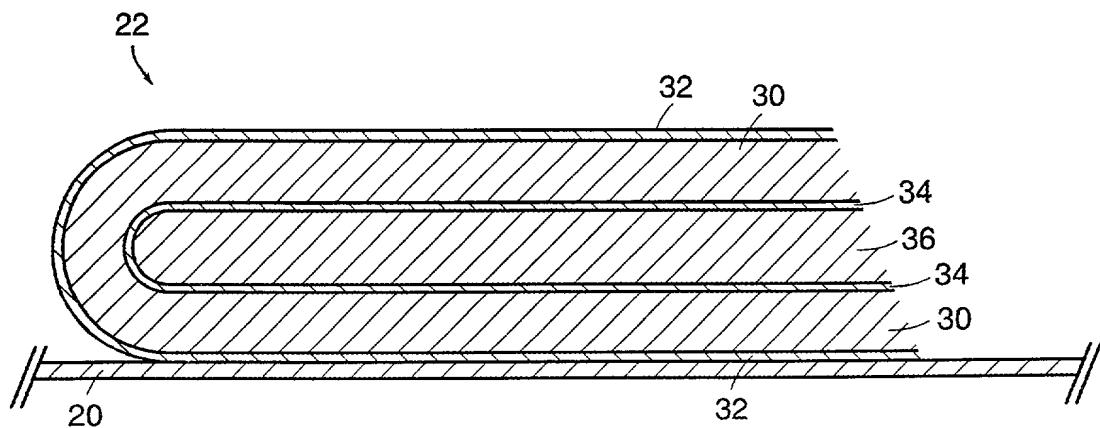


FIG. 4

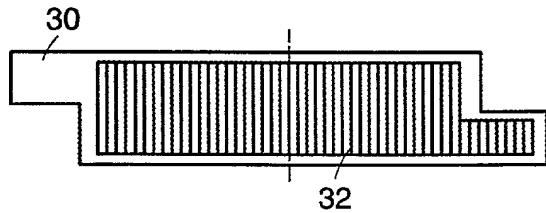


FIG. 4A

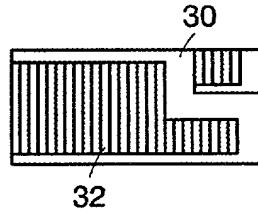


FIG. 4B

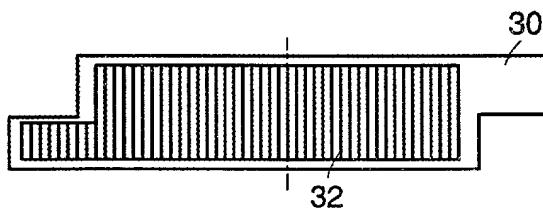


FIG. 4C

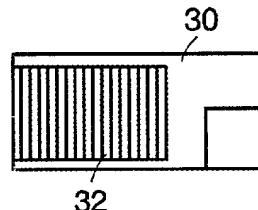


FIG. 4D

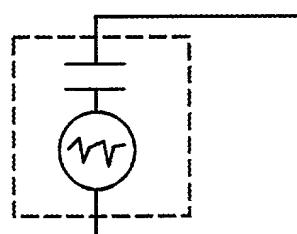
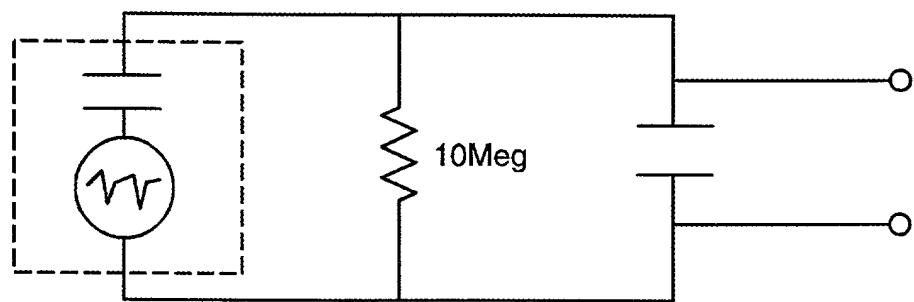


FIG. 5



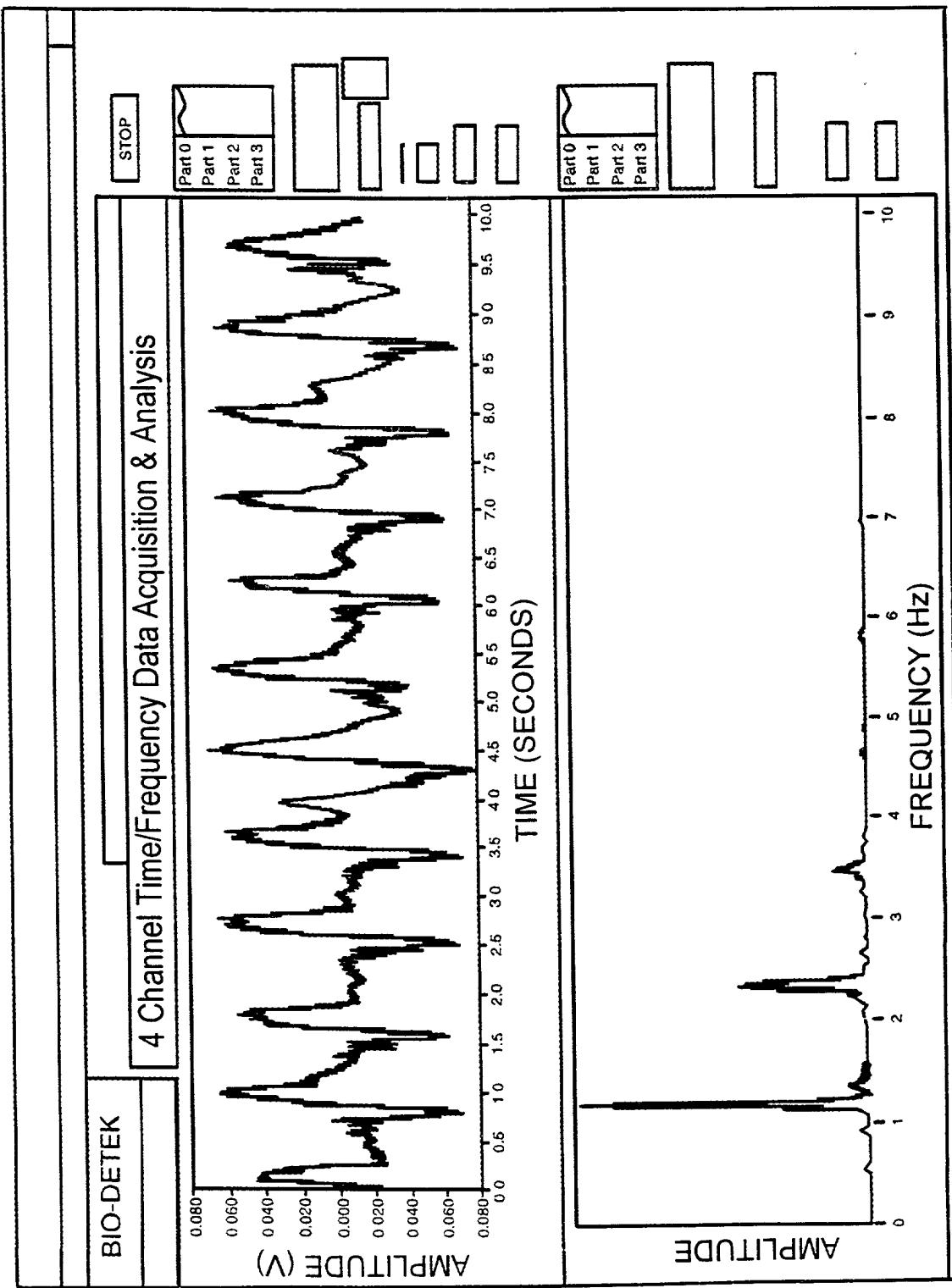
Piezoelectric
sensor

$R_{\text{termination}}$

C_{cable}

FIG. 6

FIG. 7



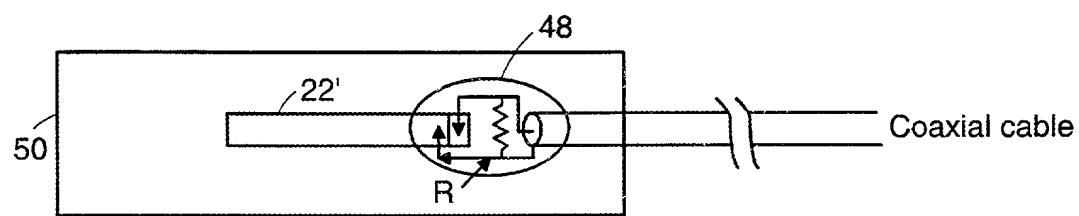


FIG. 8

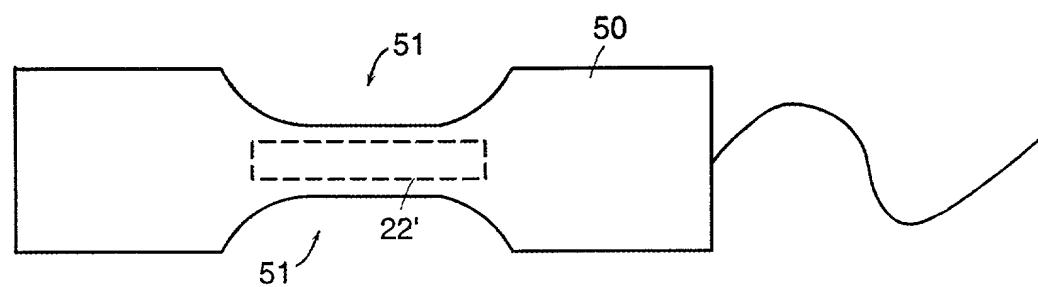


FIG. 9

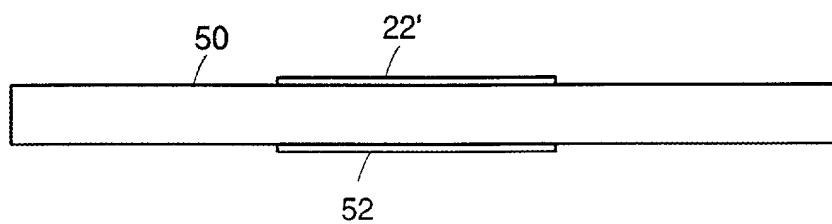


FIG. 10

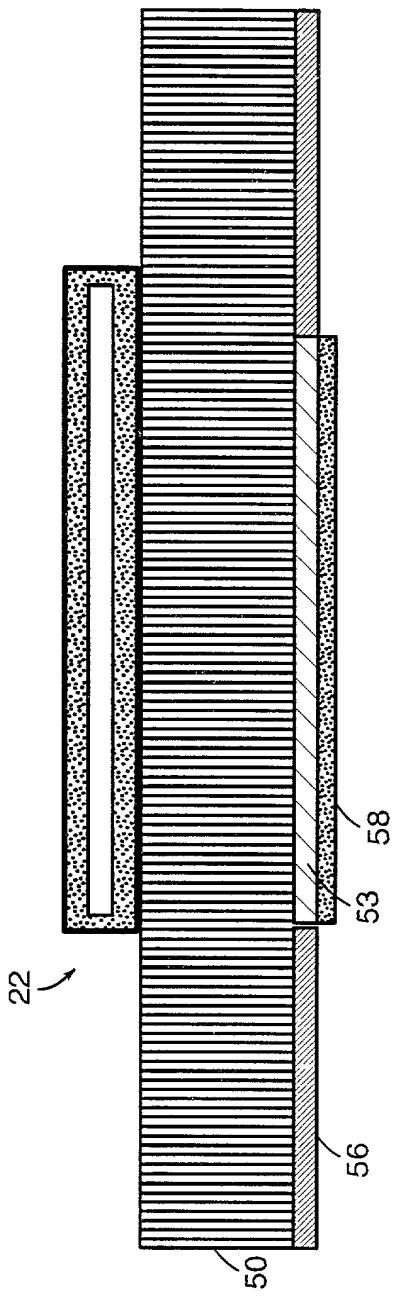


FIG. 11

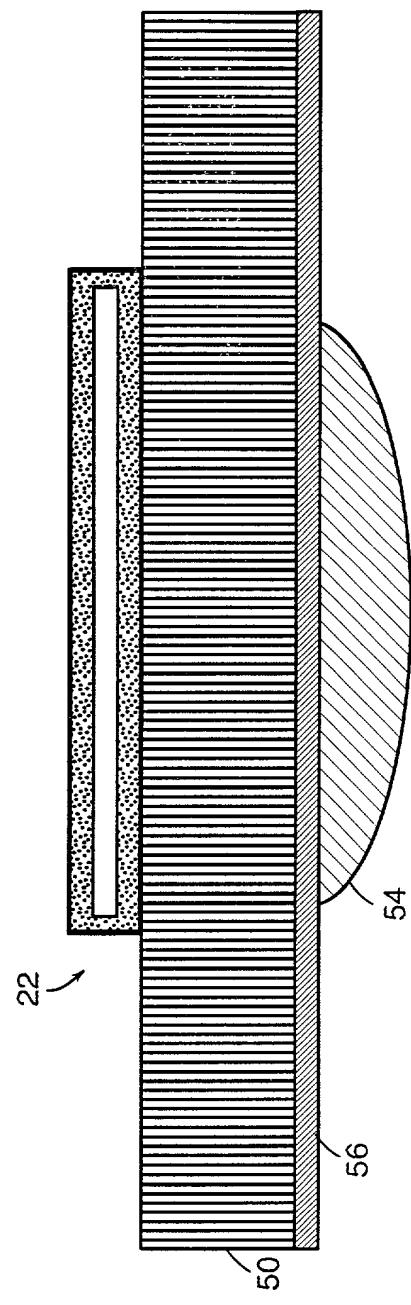
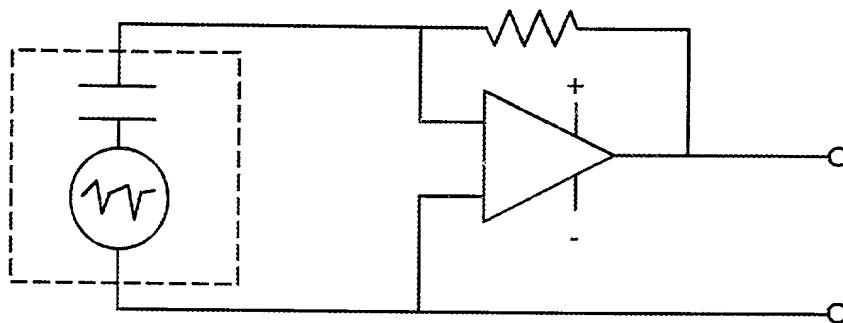


FIG. 12

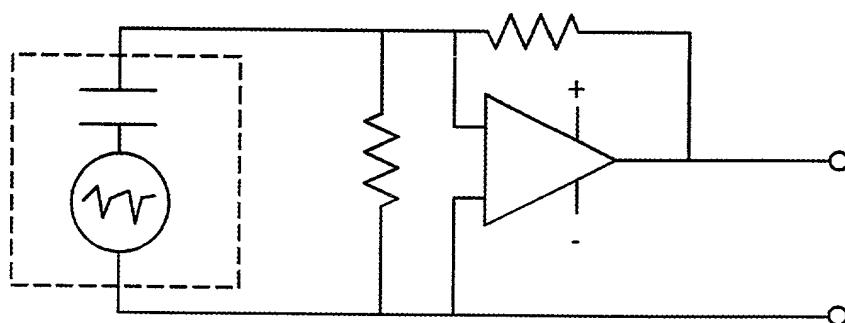
Transimpedance Amplifier



Piezoelectric
sensor

FIG. 13

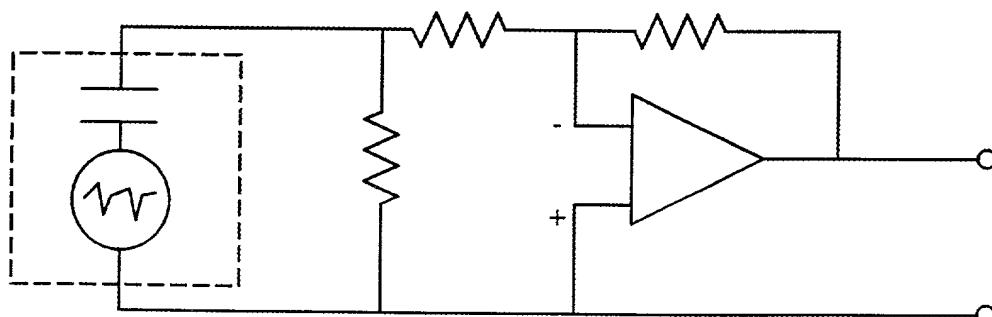
Integration Amplifier



Piezoelectric
sensor

FIG. 14

Voltage Amplifier



Piezoelectric
sensor

FIG. 15